GENERAL INDEX

Classified entries will be found under Contributors and Reviewers. New names and names of new genera, species, and varieties are printed in **bold-face** type; synonyms in *italics*.

A

Absorption of water by barley 89
Acer saccharinum, seasonal development of growth layers in 286
Aconitum 343
Actaea 9
Adaptation, genetical interpretation of 223
Africa, flora of West 343; naturalist in East 448
Alepidocalyx 451
Aluminum sheets for botanist's press 104
Anemone 13
Anemonella thalictroides 13
Apples, respiratory enzymes of 183
Aquilegia canadensis 19
Ashe, W. W., work of 230
Aspergilli 447
Atriplex 230
Australia, forests of western 343
Autocatalyst theory of growth 306

B

Baas-Becking, L. G. M., work of 344
Bacteria, sulphur 344
Bananas, temperature and ripening of 415
Banguey Island, flora of 230
Barley, absorption of water by 89
Barnhartia 343
Biological concepts, revaluation of 107
Black Hills, flora of 232
Boholia 343
Bouchea 342
Bud formation 231
Burrell, R. C. 320

C

Calamagrostis 449
Caltha palustris 2
Calycolpus 342
Campanula 343
Carpenter, G. D. H., "A naturalist in East Africa" 448
Chamberlain, C. J. 341, 444
Chemical action of ultraviolet rays 108
Chloroplast, influence of mineral elements on pigments of 132; structure of 452
Chrysler, M. A. 233
Church, Margaret B., "The Aspergilli" 447
Citrus diseases 340
Claustula 451
Cleland, R. E. 55
Clematis 13
Clements, F. E., "Phylogenetic method in taxonomy" 110
Clum, H. H., work of 448
Colloidal systems, ion effects in 445
Condylostylis 451
Connolly, J. P., work of 232
Contributors: Burrell, R. C. 320; Chamberlain, C. J. 341, 444; Chrysler, M. A. 233; Cleland, R. E. 55; Coulter, J. M. 110, 231, 343, 449; Cowles, H. C. 340, 447; Crocker, W. 228; Deuber, C. G. 132; Drain, B. D. 183; Eaton, S. V. 231, 445, 448, 452; Evans, P. Alice 253; Fuller, G. D. 111, 229, 343, 448; Gates, F. C. 170; Hanson, H. C. 286; Haupt, A. W. 30; Hayward, H. E. 232; Hoskins, J. H. 427; Johnson, Edna L. 373; Jones, P. M. 403; Link, G. K. K. 107, 229, 340, 403, 443, 447; Noé, A. C. 339; O'Hanlon, Sister Mary E. 215; Ohashi, Hiro 207; Olney, A. J. 415; Popp, H. W. 306; Proebsting, E. L. 336; Richmond, T. E. 438; Rhine, J. B. 154; Sawyer, M. Louise 329; Sax, K. 223; Sherff, E. E. 333; Shull, C. A. 108, 109, 112, 344, 446, 451, 453; Smith, G. H. 1; Stevens, F. L. 104; Taliaferro, W. H. 403; Warner, S. R. 345; Wetmore, R. H. 71, 113; Wolfe, H. S. 89, 195

Coptis trifolia 9
Cosmos **Blakei** 333
Coulter, J. M. 110, 231, 343, 449
Cowles, H. C. 340, 447
Craib, W. G., work of 342
Crop production and plant nutrition 446
Curtis, K. M., work of 451
Curtis, O. F., work of 448
Cyanophyceae 341

D

Dearness, J., work of 449
Deuber, C. G. 132
Diseases, manual of plant 443
Distribution of plants in Texas 345
Drain, B. D. 183
Drought-resistance, physiological basis of 109
Douglas Lake, plant successions about 170
Downie, D. G., work of 230

E

Eaton, S. V. 231, 445, 448, 452
Eldridge, Seba, "Organization of life" 107
Ellis, C., "Chemical action of ultraviolet rays" 108
Engler, A., "Die Natürlichen Pflanzenfamilien" 444
Enzymes of Helianthus 373
Epling, C. C., work of 342
Erigeron 231
Evans, P. Alice 253
Exophoma 449

F

Fats, translocation of in seeds 154
Fawcett, H. S., "Citrus diseases" 340
Fernald, Evelyn I., work of 232
Forestry almanac 229
Fraxinus, seasonal development of growth layers in 286; 450
Frisch, K. von, "Ergebnisse der Biologie" 340
Fuller, G. D. 111, 229, 343, 448

G

Gaillardia 231
Gametophyte of Marchantia polymorpha 215
Gardner, C. A., work of 343
Gates, F. C. 170
Geitler, L., "Die Süsswasser-Flora Deutschlands" 341
Geoprumnon 230
Gleason, H. A., work of 343
Goldschmidt, R., "Ergebnisse der Biologie" 340
Gothan, W., "Karbon und Perm-Pflanzen" 339
Grasses of Japan 449
Grenzebach, M., work of 342
Guatemala, new species from 333
Gymnosperms 444

H

Hall, H. M., "Phylogenetic method in taxonomy" 110
Hansford, C. G., work of 450
Hanson, H. C. 286
Haupt, A. W. 30
Hayward, H. E. 232
Heald, F. DeF., "Manual of plant diseases" 443
Helianthus annuus, effects of X-rays on 373
Hepatica 11
Hesperastragalus 230
Heuchera 343
Homma, Y., work of 342
Honda, M., work of 342, 449
Hoskins, J. H. 427
Hutchinson, J., "Families of flowering plants" 111
Hydrangea 450
Hygroscopic moisture and surface forces of soils 195

I

Illinois, Pennsylvania plants from 427
Indo-China, new species from 230
Inoculation, legume 438
Ito, S., work of 342

J

Jackson, H. S., work of 450
Japan, grasses of 342, 449
Johnson, Edna L. 373
Jones, P. M. 403

K

Kahlenberg, L., work of 451
Kobuski, C. E., work of 342
Koidzumi, G., work of 450

L

Lee, H. A., "Citrus diseases" 340
Legume inoculation 438
Lenticels in dicotyledons 71, 113
Lichens, British 447
Light intensity, effect on soy beans 306
Link, G. K. K. 107, 229, 340, 403, 443, 447
Lycianthes 231

M

Macrophomopsis 449
Marchantia polymorpha, germination of spores 215
Maximow, N. A., "Physiological basis of drought resistance" 109
Meiosis in anthers of Oenothera 55
Merrill, E. D., work of 230, 342, 450
Methods of analysis 112
Michaelis, L., "Effects of ions in colloidal systems" 445
Microcycas calocoma, vascular tissues of 233
Miltitzia 230
Mineral elements, influence on soy beans 132
Miyabella 342

N

Nelson, A., work of 230
Nitrogen metabolism of plants 320
Noé, A. C. 339

O

Oedogonium, **nebraskensis** 207; 450
Oenothera muricata, meiosis in anthers of 55
O'Hanlon, Sister Mary E. 215
O'Hara, C. C., work of 232
Ohashi, Hiro 207
Olney, A. J. 415
Oreocarya 231
Osterhout, G. E., work of 230

P

Paleobotany 339
Payson, E. B., work of 231
Pennsylvanian plants, structure of 427
Percival, J., work of 450
Philippines, flora of 342, 450
Phlox 231
Phragmodothidea 449
Phylogenetic method in taxonomy 110
Pia, J., "Pflanzen als Gesteinsbildner" 339
Piper, C. V., work of 451
Plasmodiophora tabaci, possible etiological rôle of 403
Podophyllum peltatum, carpeloid stamens of 329
Popp, H. W. 306
Preissia quadrata, morphology of 30
Priva 342
Proebsting, E. L. 336
Pyrus, interspecific grafts of 336

R

Ranunculaceae, anatomy of 1
Ranunculus 16
Respiratory enzymes of apples 183
Reviews: Carpenter's "A naturalist in East Africa" 448; Church's "The Aspergilli" 447; Clements' "Phylogenetic method in taxonomy" 110; Eldridge's "Organization of life" 107; Ellis' "Chemical action of ultraviolet rays" 108; Engler's "Die Natürlichen Pflanzenfamilien" 444; Fawcett's "Citrus diseases" 340; Frisch's "Ergebnisse der Biologie" 340; Geitler's "Die Süsswasser-Flora Deutschlands" 341; Goldschmidt's "Ergebnisse der Biologie" 340; Gothan's "Karbon und Perm-Pflanzen" 339; Hall's "Phylogenetic method in taxonomy" 110; Heald's "Manual of plant diseases" 443; Hutchinson's "Families of flowering plants" 111; Lee's "Citrus diseases" 340; Maximow's "Physiological basis of drought-resistance" 109; Michaelis' "Effects of ions in colloidal systems" 445; Pia's "Pflanzen als Gesteinsbildner" 339; Ruhland's "Ergebnisse der Biologie" 340; Russell's "Plant nutrition and crop production" 446; Smith's "Monograph of the British lichens" 447; Thom's "The Aspergilli" 447; Weaver'

"Root development of field crops" 228; Wells' "Chemical action of ultraviolet rays" 108; Whitehead's "Science and the modern world" 107
Rhine, J. B. 154
Richmond, T. E. 438
Riley, A. M., work of 342
Root development 228
Ruhland, W., "Ergebnisse der Biologie" 340
Rusby, H. H., work of 231
Russell, Sir J., "Plant nutrition and crop production" 446
Rusts of South America 450
Rydberg, P. A., work of 230, 343

S

Sabal 343
Salix 450
Sawyer, M. Louise 329
Sax, K. 223
Semipermeable membranes 451
Senecio 231
Sherff, E. E. 333
Shull, C. A. 108, 109, 112, 344, 446, 451, 453
Siam, flora of 342; new orchids of 230
Small, J. K., work of 343, 451
Smith, Annie L., "Monograph of the British lichens" 447
Smith, G. H. 1
Soils, surface forces of 195
Sophia 230
South American rusts 450
Soy beans, effects of light intensity on 306; influence of mineral elements on 132
Sphacele 342
Stamens, carpeloid of Podophyllum 329
Stevens, F. L. 104
Stock and scion influence 438
Stomatal movements 453
Strugger, S., work of 453
Successions of plants about Douglas Lake 170
Sulitia 343
Summers, F., work of 231

T

Taliaferro, W. H. 403
Taxonomic notes 449
Temperature, and respiration in apples 183; of bananas 415
Tetrapodenia 343
Texas, distribution of plants in 345
Thalictrum dioicum 13
Thlaspi 231
Thom, C., "The Aspergilli" 447
Tiffany, L. H., work of 450
Tilia 230
Tobacco mosaic 403
Translocation of fats in seeds 154
Transpiration, functions of 448
Trollius laxus 6

U

Ultraviolet rays, chemical action of 108
Utah, ecological study in 253

W

Warner, S. R. 345
Weaver, J. E., "Root development of field crops" 228
Weber, F., work of 453
Weedon, Amy G., work of 449
Wells, A. A., "Chemical action of ultraviolet rays" 108
Wetmore, R. H. 71, 113
Whitehead, A. N., "Science and the modern world" 107
Wolfe, H. S. 89, 195

X

X-rays, effect on Helianthus 373

Z

Zamia 451
Zirkle, C., work of 452